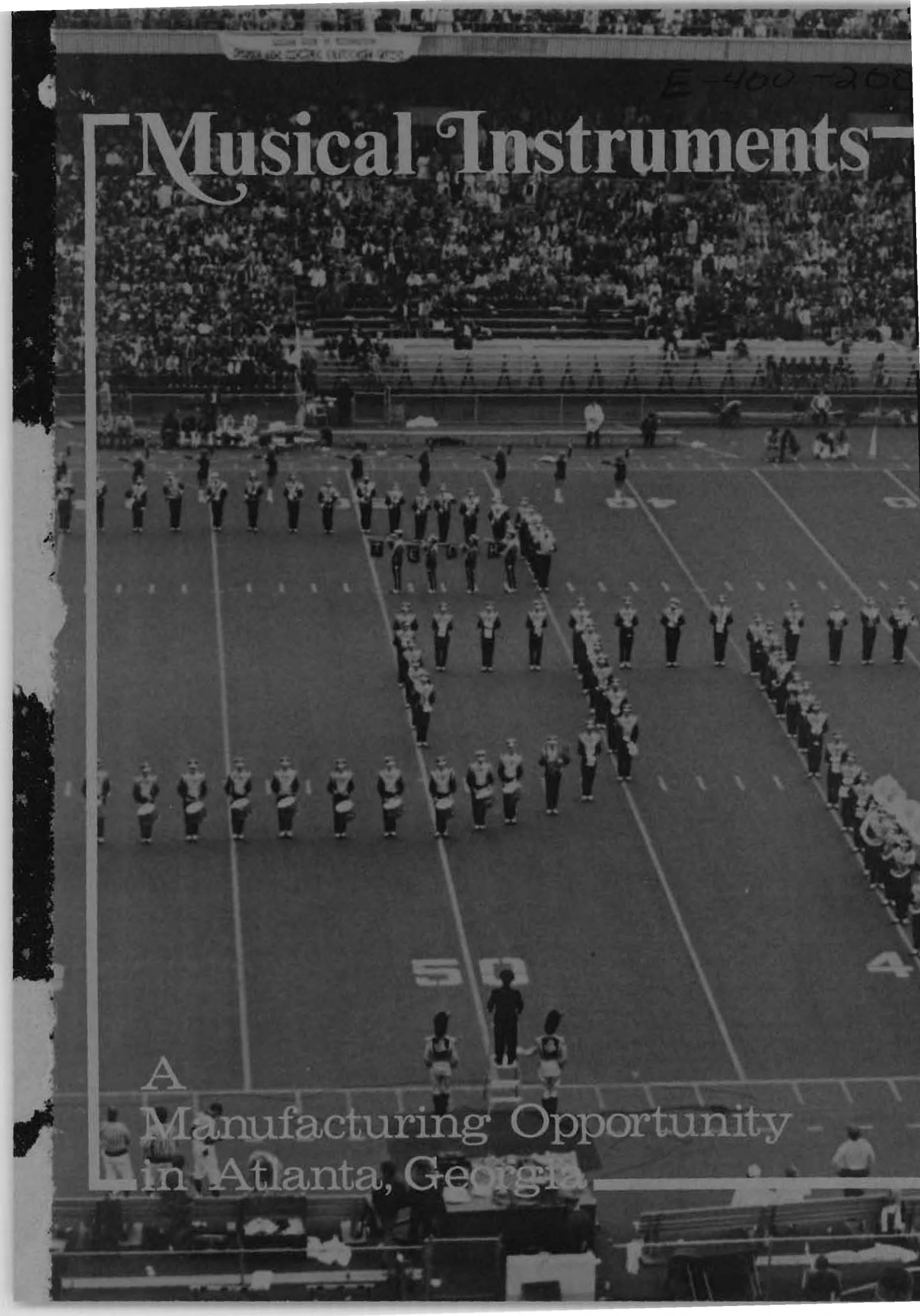
Musical Instruments
A
Manufacturing Opportunity
in Atlanta, Georgia

Project E-400-200

MUSICAL INSTRUMENTS
A Manufacturing Opportunity in Atlanta, Georgia

by

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Summary

The value of manufacturers' shipments of musical instruments in the U. S. has increased from $237 million in 1958 to $607 million in 1972. During the same time period, music industry retail sales expanded from $441 million to more than $1.3 billion, with a $2 billion market projected by 1980.

However, because of keen competition, both domestic and foreign, some U. S. companies, to improve their profitability, have located or relocated in southern states where labor costs are lower. It is prudent, therefore, for a firm contemplating such action to investigate areas which will place the company in the most advantageous competitive position possible.

Analysis of location factors shows that the metropolitan Atlanta area offers six advantages to a musical instrument manufacturer.

1. Substantially lower production costs can be anticipated, ranging from 2.7% to 6.4% of the value of the product.
2. A plentiful supply of the type of manpower required is available in the area. The city has a particularly good supply of engineers and technicians for the manufacture of electronic musical instruments.
3. A state-sponsored pre-job selection and training program for production personnel, tailored to individual plant requirements, is available.
4. Adequate sources of raw materials needed in the production process are found in and around Atlanta, or can be shipped to the area at low cost.
5. There is a large and expanding market in the immediate area.
6. Atlanta has excellent transportation facilities to ship the finished products to the regional and national markets.

These assets should place a plant in metropolitan Atlanta at a distinct competitive advantage over plants in other areas of the United States.

INTRODUCTION

The purpose of this report is to enumerate and describe to existing manufacturers of musical instruments the advantages which can be gained by producing these products in Atlanta, Georgia.

In recent years, several well-known musical instrument manufacturing companies have established plants in the South to serve both regional and national markets. The factors that are likely to have influenced the corporate decisions to build in southern states appear to favor expansion of the industry into Georgia. This study will focus attention on some of these factors.

The items relative to the report fall largely into the industrial category classified by the Office of Management and Budget as "musical instruments," which is coded as Standard Industrial Classification (SIC) 3931 and is composed of pianos, organs, wind instruments, fretted and string instruments, drums, and electronic musical instruments.[1/] Also included in this industry grouping are musical accessories and parts.

The manufacture of musical instruments is well suited for medium and large-plant production. In 1967, the output of 90 plants (out of a total of 343), each employing at least 50 workers, was valued at $400 million, or 92% of the entire value of shipments for the industry.

Production labor in these plants consists of skilled and semiskilled workers, readily trainable, with wood, plastics, and metal fabricating capabilities.

The greatest numbers of musical instruments produced domestically are presently manufactured in the Midwest and East. The 1972 Census of Manufactures indicates that plants in Illinois, Indiana, and New York produce more than 47% of the U. S. output. Distribution to consumer is accomplished primarily through music and department stores.

Although the bulk of musical instrument sales are made to adults, the purchases are most frequently made for use by children. It is estimated that more than half of the music products sold at the retail level are for amateur musicians under 18 years old.

1/ Standard Industrial Classification Manual, Executive Office of the President, Bureau of the Budget, Office of Management and Budget, 1972.

Surveys conducted by the National Opinion Research Center, University of Chicago, indicate that approximately 20% of the population, or 40 million Americans, play a musical instrument. According to reliable industry figures, there are some $15 billion worth of musical instruments in U. S. homes, and still the market is far from saturated. Thanks to thousands of school children who "take band," musical instrument manufacturers can count on a continuing demand for their production.

MARKETS AND OUTLOOK

National Market

In 1972, the value of shipments for musical instruments and parts was $607 million. This represents an annual increase of 6.9% from the 1958 total of $237 million. By using shipment volumes for the 15 years from 1958 through 1972 as a basis for a first-degree projection, a production forecast of $677 million worth of instruments and parts can be made for 1977. (See Figure 1.)

This growth of production experienced by the industry is the result of increasing personal consumption expenditures on music products, which, on a national scale, remain very close to a constant percentage of total personal consumption expenditures.

Annually, the American Music Conference, a national not-for-profit service organization dedicated to stimulating participation in music, compiles a comprehensive tabulation of music instrument sales from input furnished by manufacturers' associations and the U. S. Tariff Commission. These compilations are used in Table 1 along with U. S. Department of Commerce data to show how small the variation is from year to year.

Since reliable forecasts are available for income for the U. S., it can be forecasted that expenditures for musical instruments should grow more than 50% during the period between 1972 and 1980.[1/] Consequently, it can be expected that by 1980 people in the United States will be spending just under $2 billion each year for music products.

Regional Market

Although the manufacture of musical instruments is not market oriented, it is an advantage to have a sizable market near the plant. According to the 1967 Census of Business, in Georgia and the surrounding states a good demand for these products exists.

1/ The 1972 Obers Projections, updated in April 1974 and prepared as a coordinated effort by the Office of Business Economics, U. S. Department of Commerce, and the Economic Research Service, U. S. Department of Agriculture, presents estimates for various economic activities in the U. S. for years beginning each decade 1980 through 2020. These estimates are the basis for the above projection.

FIGURE 1

VALUE OF SHIPMENTS OF MUSICAL INSTRUMENTS

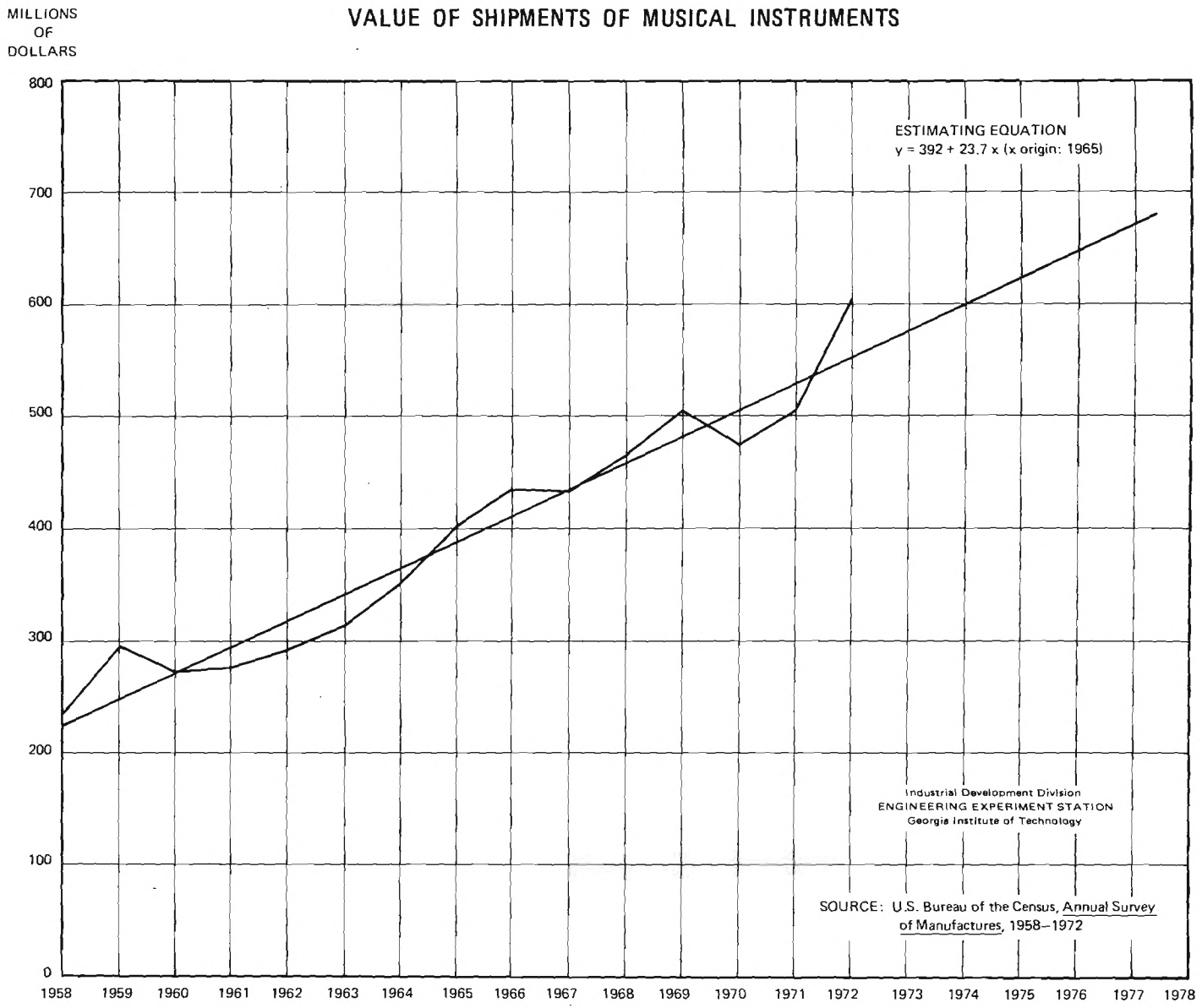

Table 1

TOTAL PERSONAL CONSUMPTION EXPENDITURES
COMPARED WITH RETAIL SALES OF MUSIC INDUSTRY PRODUCTS

Year	Personal Consumption Expenditures (A) (in billions of dollars)	Music Industry Sales (B) (in millions of dollars)	(B) as a Percent of (A)
1958	293	441	.15
1959	314	490	.16
1960	325	500	.15
1961	337	538	.16
1962	355	608	.17
1963	375	661	.18
1964	401	731	.18
1965	435	887	.20
1966	466	955	.20
1967	492	924	.19
1968	536	954	.18
1969	580	957	.17
1970	618	1,005	.16
1971	667	1,106	.17
1972	727	1,306	.18

Sources: Music U. S. A. 1974, American Music Conference; U. S. Department of Commerce data.

The southeastern states constitute a large and expanding market for musical instruments.[1/] This is demonstrated in Table 2, which shows musical instrument retail sales for recent census years. Based on anticipated future national sales, by 1980 the retail music market in the Southeast should be in excess of $200 million annually.

Considering the high correlation between music industry sales and personal consumption, it is not surprising to find a heavy concentration of demand in the more populated urban areas. Musical instrument stores in six southeastern cities retail more than one-third of the regional total. These cities, along

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1/ Alabama, Florida, Georgia, North Carolina, South Carolina, and Tennessee.

with four others, make up almost 47% of the music store market in the region. (See Table 3.)

Table 2

VOLUME OF SALES FOR MUSICAL INSTRUMENT STORES
IN THE U. S. AND SOUTHEAST, 1958, 1963, 1967
(in millions of dollars)

State	1958	1963	1967
Alabama	4.4	6.2	9.2
Florida	5.0	7.5	10.8
Georgia	11.5	15.4	26.9
North Carolina	6.7	9.4	16.3
South Carolina	2.1	4.2	6.3
Tennessee	2.0	7.9	11.9
Total	31.7	50.6	81.4
United States	410.3	522.9	724.8
S. E. Percent of U. S.	7.7	9.7	11.2

Table 3

MUSICAL INSTRUMENT STORE SALES
IN SELECTED SOUTHEASTERN CITIES, 1967

City	Volume of Sales (in millions of dollars)
Atlanta, Georgia	5.0
Birmingham, Alabama	3.7
Charlotte, North Carolina	4.7
Ft. Lauderdale-Hollywood, Florida	2.9
Greensboro, North Carolina	2.6
Memphis, Tennessee	2.6
Miami, Florida	6.1
Nashville, Tennessee	3.1
Orlando, Florida	2.4
Tampa, Florida	5.1
	38.2

Foreign Competition and Sales

In 1973, imports of musical instruments, parts, and accessories totaled $102.7 million. Although greater in dollar volume by more than $10 million over 1972, the number of instruments imported declined substantially, 2.8 million units in 1973 compared with 3.5 million units in 1972, the peak year. U. S. Department of Commerce statistics indicate that for 1974 the value of music product imports, keeping pace with the increase in domestic sales of 15% to 20%, was about $120 million.

U. S. exports of music products are also expanding. During the 1971-1973 period, the overseas shipments of these items more than doubled, from $31 million to $66 million.

Except for the string instrument group, many of the changes in annual import volume of music products have been influenced to a great extent by price. For example, from 1972 to 1973, sales of domestically made fretted instruments and amplifiers increased 17% while imports decreased slightly. At the same time, the average unit price for domestics increased 8% against 35% for imports. Similar cases can be presented for pianos, organs, and band instruments.

Not only has this price pressure affected import volume, but it also has created major shifts in import sources. In 1972, Japan and Korea shipped to the U. S. 864,000 and 384,000 guitars, respectively. For 1974 quantities for the two countries were reversed, 428,000 and 567,000, and the total had decreased. For the two-year period, the Japanese average price went from $14 to $29 and Korean prices rose from $5 to $10.

It would seem that, by minimizing the need for product price increases, the U. S. musical instrument manufacturers could reestablish a more firm control of the domestic market. A basic approach toward this end would be the reduction of production costs, a procedure which subsequently would place most foreign firms in a less favorable position for the American instrument dollar.

LOCATION FACTORS

Because musical instrument producers must meet exacting demands for craftsmanship while utilizing mass-production methods to keep profits from being eroded, a number of instrument manufacturers have moved to southern states where cost savings can more readily be realized.

This southern movement by the musical instrument industry is evidenced in the U. S. Bureau of the Census, County Business Patterns. During the 1964-1972 period (eight years), the number of plants reporting the manufacture of musical instruments in a 10-state southern area (North Carolina to Texas) increased from 14 to 30. This regional increase of 16 plants is one more than the total growth in the U. S., from 298 to 313. Fifteen plants, or 50% of the southern operations, employ more than 100 workers, while the national percentage of large music product plants (100 or more employees) is 17.6% -- 55 of 313 establishments. The state locations of these companies are shown on Map 1.

The single most important consideration in locating a new instrument plant is the availability of an adequate supply of low-cost labor. This is especially true for the musical instrument industry, where the ratio of payroll to value added is significantly high (52% in 1972). Since labor costs are large, a producer can substantially lower his production costs in a new musical instrument plant by locating the facility in a geographic region which offers relatively low rates, high productivity, and a satisfactory supply of the type labor required. Map 2 shows, by percentage, present employment dispersement.

For the musical instrument industry, Atlanta, Georgia, is located in such an area.

Among the assets which Georgia, and Atlanta in particular, has to offer a manufacturer of musical instruments are lower production labor costs; an abundant supply of technicians, skilled and unskilled labor; proximity to markets and sources of raw materials; and the South's most extensive transportation facilities for both passengers and freight.

Lower Labor Costs

For more than a decade, production labor costs for the musical instrument industry have ranged from 20% to 24% of the value of shipments. According to preliminary Census data for 1972, costs are still within this range. Since

MAP 1

NUMBERS OF LARGE MUSICAL INSTRUMENT PLANTS IN THE U.S.
(100 OR MORE EMPLOYEES)

UNITED STATES

0 100 200 300 MILES

SOURCE: U.S. Bureau of the Census,
County Business Patterns, 1972

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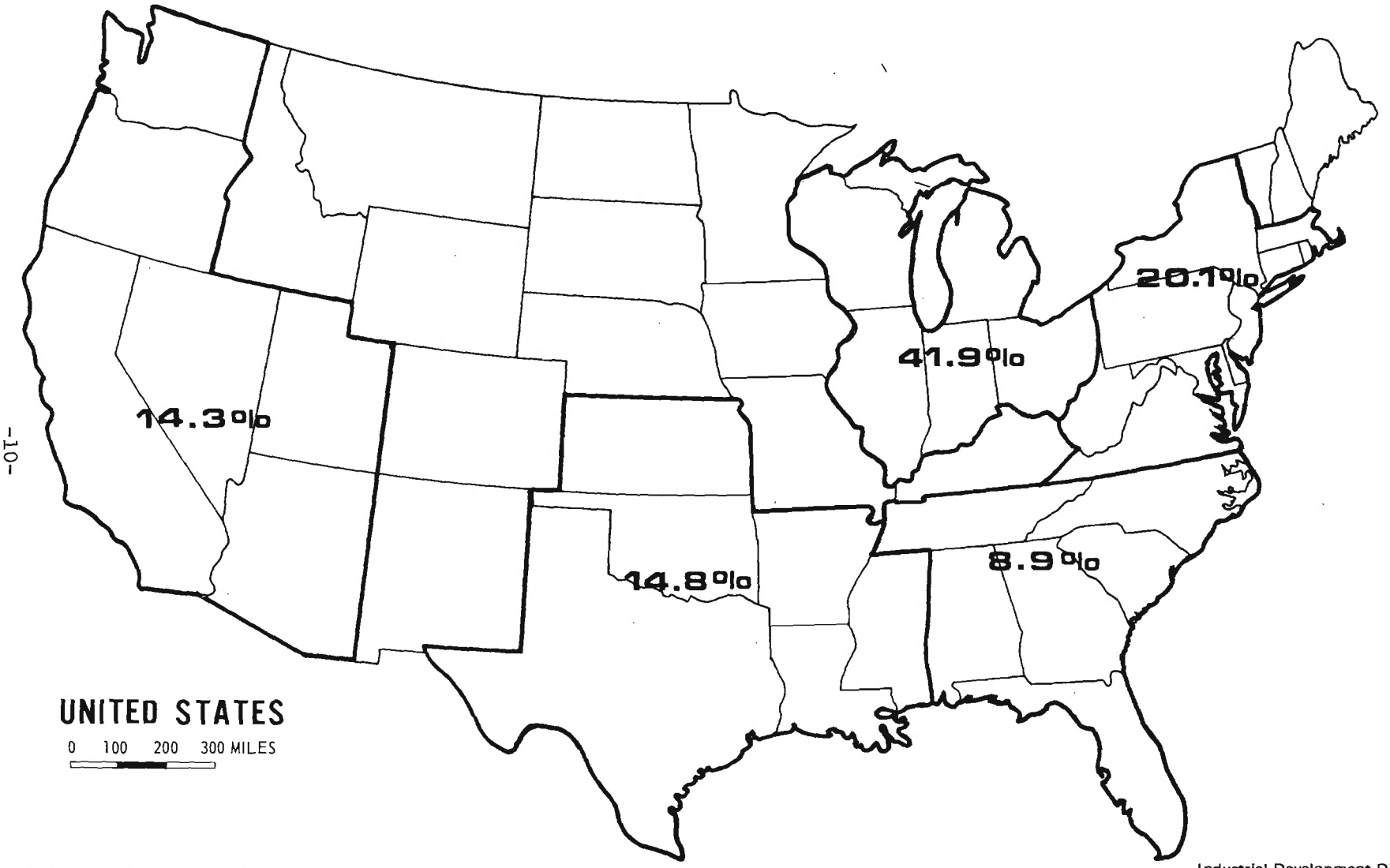
MAP 2

EMPLOYMENT IN THE U.S. MUSICAL INSTRUMENT INDUSTRY



SOURCE: U.S. Bureau of Census,
County Business Patterns, 1972

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production labor costs, which represent a large portion of the value of the finished product, vary greatly in different sections of the U. S., they are of primary consideration in choosing a location for a new plant.

A comparison of average production wage rates for major producing states and Georgia is given in Table 4. Because Georgia has no manufacturers of musical instruments, it was necessary to derive its average state wage rate from occupation and wage similarities of neighboring southern states (principally North Carolina and Tennessee) that do produce musical instruments.

Table 4

AVERAGE PRODUCTION WAGE RATES FOR MUSICAL INSTRUMENTS, 1972

Producing State	Average Hourly Wage Rates
California	$3.71
Illinois	3.57
Indiana	3.50
New York	3.10
Georgia (South)	2.67

Source: U. S. Bureau of the Census, Preliminary Report, 1972 Census of Manufactures, Industry Series.

The Occupational Classification and Industry Index, published by the U. S. Department of Labor, Manpower Division, refers to jobs in musical instrument production as being concerned with "cutting, shaping, machining, assembling, polishing and finishing of all kinds of musical instruments, parts, and materials." Since these metalworking operations in general are more prevalent in industrial plants of SIC 38 than in plants classified in SIC 39, the instruments and related products industries (SIC 38) were used as a basis to determine the degree of wage rate similarity among the three southeastern states. Although Georgia's hourly wage rates for these industries were slightly below both North Carolina and Tennessee, for the purpose of tabular comparison, the southern hourly wage rate in the musical instrument industry was used to represent Georgia.

Of the major producing states listed in Table 4, New York currently has the lowest hourly wage rates in the musical instrument industry. Even New York's rates, however, are 43 cents per hour higher than in Georgia, while rates in California exceed those in Georgia by more than a dollar an hour.

The importance of these wage differentials can be appreciated when the disparities in yearly labor costs of plants with the same production volumes are matched. For a representative-size plant manufacturing musical instruments, the potential savings in annual production labor costs for a Georgia location as compared with the other states are shown in Table 5.

Table 5

ESTIMATED ANNUAL SAVINGS IN PRODUCTION LABOR COST
OF A GEORGIA LOCATION
FOR A REPRESENTATIVE-SIZE MUSICAL INSTRUMENT PLANT
OVER OTHER LOCATIONS

Plant Location	Savings of a Georgia Plant
California	$108,900
Illinois	94,240
Indiana	86,911
New York	45,026

Notes: A representative-size plant is estimated from census data to ship $1.7 million worth of goods annually.

The method of computing the savings of a Georgia plant is shown in Appendix 1.

The labor cost savings which could be realized in a Georgia location amount to from 2.7% to 6.4% of the value of the product. Since profit before taxes for the industry ranges between 10% and 15% of sales value, it would be significantly increased by the above savings in labor costs.

Lower Work Stoppage Rate

Georgia has a lower work stoppage percentage than the states in the North and West presently producing the bulk of the domestic musical instruments output. The ratio of work stoppage to total work time for the extended period

1962-1971 was 9% less in Georgia than in California, 26% less than in New York, and 30% and 50% less than in Illinois and Indiana, respectively.

In addition, metalworking companies with multi-plant operations throughout the country indicate that absenteeism caused by inclement weather is minimal in the Georgia plants.

Pre-Job Training

A musical instrument manufacturer who is locating or relocating in Georgia need not suffer for lack of experienced production workers. Since 1966, Georgia's Quick Start Program has been available to serve the manpower training requirements of new industry. Through any of 25 area vocational-technical schools, Quick Start, a totally state-supported program, is designed to screen and train workers for specific, clearly defined jobs in a particular plant. This training produces production employees who know their work and plant requirements before they are hired. The manufacturer benefits by a lower labor turnover rate and higher initial productivity.

Labor Availability

An assessment of available labor in Atlanta is published on a quarterly basis by the Georgia Department of Community Development. An example, issued for the last quarter of 1974, placing recruitable labor for the area within a commuting radius of 35 miles at more than 37,000 persons, of whom 92% are expeienced workers, is shown in Appendix 2.

Intangible in respect to monetary savings but of vital importance to plant production is the availability of technical and engineering manpower. This need can be readily satisfied in Atlanta by the Georgia Institute of Technology and Southern Technical Institute, which graduate some 1,500 engineers and technicians annually.

Proximity to Raw Material Sources

Of the raw materials used in the production of items in the musical instrument industry, the following are the most important in terms of expenditures for materials consumed:

(a) Rough and dressed lumber

(b) Veneer and plywood

(c) Steel mill shapes and forms

(d) Electronic-type components and accessories

(e) Parts specially designed for musical instruments

In addition, expenditures for plastics and resin materials and fabricated wood components are significant. Of all these items, only the musical instrument parts are not available in Georgia or its contiguous states.

Steel mill configurations are made in the Atlanta area, and hence any freight costs to an Atlanta user would be negligible, while the lumber and wood products required for fabrication can be shipped from nearby Georgia counties at minimal cost. Electronic components needed in the production process are delivered freight allowed.

Therefore, an Atlanta plant would be well located for the procurement of the materials required for manufacturing musical instruments.

Transportation Facilities

Whereas raw materials used in manufacturing are shipped by rail and truck, the finished products are delivered by truck and air, at a cost, according to one major musical instrument manufacturer, of 4% of value of shipments. Because of the special care and handling required to ship these delicate precision instruments, this percentage is probably typical of the entire industry.

Atlanta is well equipped to handle the transportation needs of the music instrument industry, since the city is served by 69 motor freight carriers, six railroads, and 11 air freight carriers. Through these carriers, more freight traffic is generated from Atlanta than from any other city in the South.

In addition, excellent transportation facilities are available to company officials on business trips to any point in the U. S. There are direct airline flights from Atlanta to more cities than from any other airport in the country. The Hartsfield Atlanta International Airport links the metro area nonstop with 96 cities; it ranks second in the nation in number of commercial aircraft departures and second in number of passengers boarded.

* * *

The combination of competitive advantages available in the metropolitan Atlanta area makes it a logical location for a musical instrument manufacturing plant to serve the Southeast and the nation.

APPENDICES

Appendix 1

METHOD OF COMPUTING SAVINGS IN PRODUCTION LABOR COST OF A GEORGIA PLANT

Formula:

Annual Savings = Wage differential per man-hour x Yearly man-hours expended to produce $1.7 million in shipments[1/]

Savings of a Georgia plant over a plant location in:

California	($3.71 - $2.67)	x	104,712	=	$108,900
Illinois	(3.57 - 2.67)	x	104,712	=	94,240
Indiana	(3.50 - 2.67)	x	104,712	=	86,911
New York	(3.10 - 2.67)	x	104,712	=	45,026

1/ According to the preliminary report of the 1972 Census of Manufactures, the average shipment value of musical instruments produced per man-hour was $16,235. Therefore, the number of man-hours required to produce the output of a representative-size plant ($1.7 million annual shipments) would be 104,712.

Appendix 2

ESTIMATED RECRUITABLE LABOR FOR ATLANTA, GEORGIA
FOURTH QUARTER, 1974

	Commuting Radius from Location		
	15 Miles	25 Miles	35 Miles
Male			
Experienced industrial workers	1,875	2,268	2,870
All other experienced workers	10,347	12,010	13,318
Inexperienced workers	1,079	1,248	1,358
Total Male	13,301	15,526	17,546
Female			
Experienced industrial workers	2,126	2,571	3,273
All other experienced workers	11,714	13,601	15,119
Inexperienced workers	1,218	1,415	1,541
Total Female	15,058	17,587	19,933
Male and Female			
Experienced industrial workers	4,001	4,839	6,143
All other experienced workers	22,061	25,611	28,437
Inexperienced workers	2,297	2,663	2,899
Total Male and Female	28,359	33,113	37,479
Annual High School Graduates (included in above data)			
Male	7,334	8,758	10,035
Female	8,051	9,567	10,911
Total	15,385	18,325	20,946

Source: Georgia Department of Community Development.